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Nematodes from the Deep-Sea Fishes of Suruga Bay

I. A New Rhabdochonid Nematode, *Johnstonmawsonoides nemichthyos* from the Nemichthyid Fish

By

Masaaki MACHIDA

Department of Zoology, National Science Museum, Tokyo

Through the courtesy of Mr. Shunya KAMEGAI, the author had an opportunity to examine nematodes of deep-sea fishes of Suruga Bay, at the Pacific coast of central Japan. The fishes were obtained from the depth of 280–530 m by commercial trawling for shrimps. The present report deals with a new rhabdochonid nematode, *Johnstonmawsonoides nemichthyos*, from the nemichthyid fish. The nematodes were preserved in 5% formalin and cleared in Gater's solution. The specimens are deposited in the collection of the National Science Museum, Tokyo.

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Johnstonmawsonoides nemichthyos n. g., n. sp.

(Figs. 1–5)

Host. *Nemichthys scolopaceus* RICHARDSON, Japanese name "Shigi-unagi".

Habitat. Intestine.

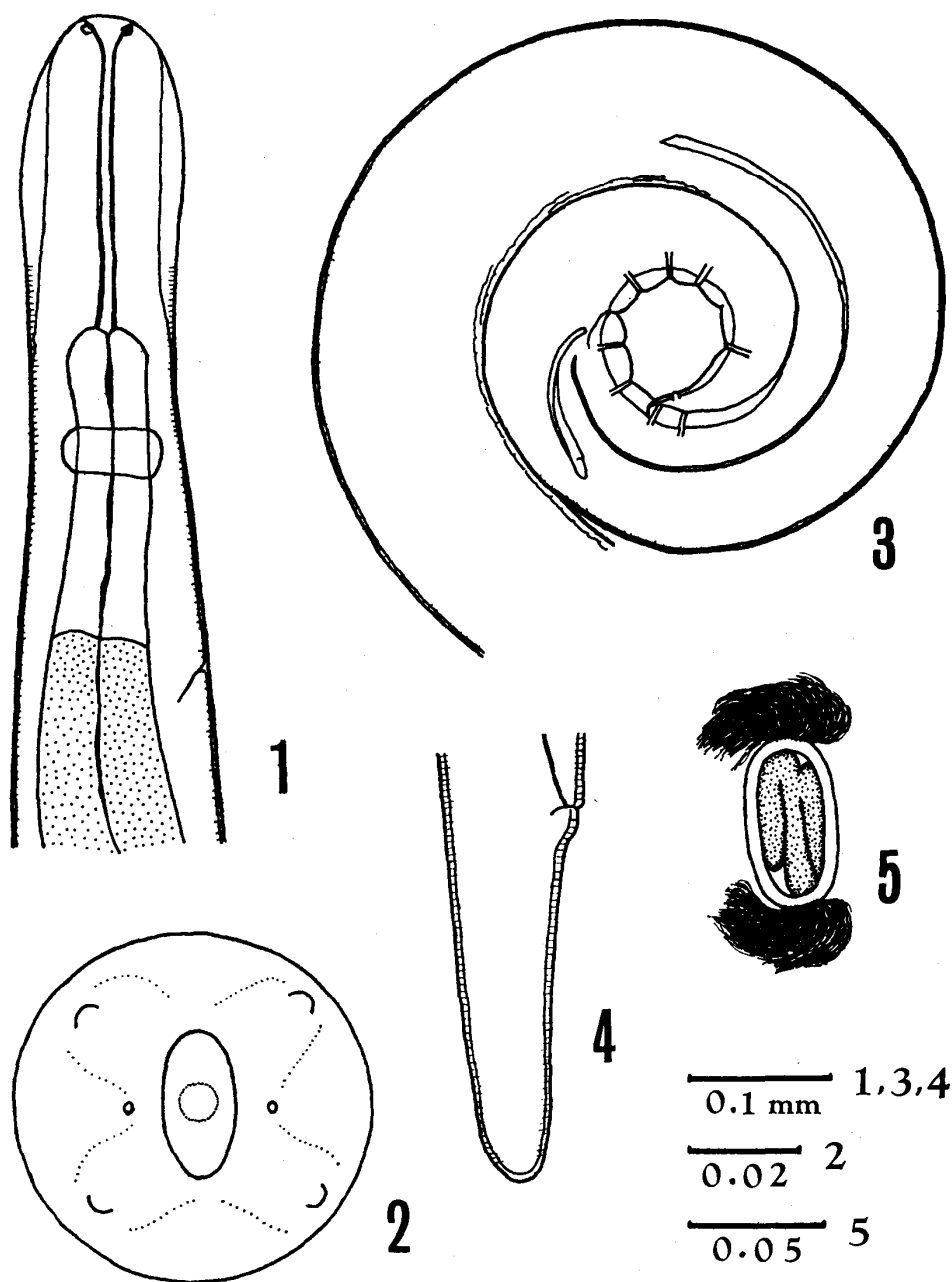
Locality. Suruga Bay, Japan.

Date. 19–IV and 29–X–1973.

Specimen No. NSMT-As-1393.

Description. Body filiform. Male smaller, spirally coiled posteriorly. Cuticle transversely striated except for anterior end of body. Cephalic cuticle slightly swollen, but inconspicuous in immature worm. Mouth bare, dorsoventrally elongate, with four cephalic papillae and two amphids. Vestibule slender, with very fine transversely striated chitinous wall. Esophagus divided into two portions; anterior portion short and muscular, posterior portion long and glandular. Nerve ring slightly anterior to equator of muscular esophagus. Tiny cervical papillae symmetrical, at junction of vestibule with esophagus. Excretory pore near junction of muscular esophagus with glandular esophagus.

Male. Body 11.8–15.8 mm long and 0.11–0.15 mm wide. Vestibule 0.19–0.24 mm



Figs. 1–5. *Johnstonmawsonoides nemichthyos* n. g., n. sp. — 1. Anterior end of female, lateral view. — 2. Apical view of cephalic end (from the photograph by the scanning electron microscope). — 3. Posterior end of male, lateral view. — 4. Posterior end of female, lateral view. — 5. Egg.

long and 0.010–0.013 mm wide near its posterior end. Muscular and glandular esophagus 0.19–0.28 mm and 1.12–1.55 mm long, respectively. Cervical papillae, nerve ring and excretory pore at 0.21–0.24 mm, 0.27–0.36 mm and 0.39–0.51 mm from head end, respectively. Caudal alae narrow; several longitudinal striae running on ventral

surface anterior to caudal alae. Four pairs of preanal and five pairs of postanal papillae pedunculate, of which the posteriormost pair has short peduncle. Spicules unequal; right spicule stout, 0.12–0.16 mm long and left one slender, 0.54–0.66 mm long. Tail bluntly pointed, 0.22–0.28 mm long.

Female. Body 16.1–23.7 mm long and 0.17–0.25 mm wide. Vestibule 0.21–0.27 mm long and 0.015–0.018 mm wide near its posterior end. Muscular and glandular esophagus 0.21–0.30 mm long and 1.34–1.70 mm long, respectively. Cervical papillae, nerve ring and excretory pore at 0.21–0.24 mm, 0.28–0.35 mm and 0.39–0.48 mm from head end, respectively. Vulva near equator of body, at 8.2–12.8 mm from head end and divided body length in proportion of 1:0.82–1.02. Vagina 0.025–0.030 mm long; ovejector running toward posterior, 0.09–0.1 mm long including sphincter. Uteri opposed. Anterior ovary near junction of esophagus with intestine and posterior ovary some distance anterior to anus. Eggs elliptical, thick-shelled, containing larva, $0.054\text{--}0.070 \times 0.025\text{--}0.036$ mm, with downy ornament at both poles. Tail bluntly pointed, 0.21–0.35 mm long.

Discussion. The present genus resembles *Johnstonmawsonia* in the structures of the cephalic part, namely, the mouth is bare without lips or pseudolabia, the cephalic papillae and amphids are found on the cephalic end, and the vestibule is not armed with teeth in its anterior portion. However, differences are observed in the shape of the mouth, and the structures of male caudal part and of the egg. In *Johnstonmawsonia*, the mouth is round, the caudal alae are lacking, whereas the gubernaculum exists, and the egg is smooth without filaments. In respects that the structures of male caudal part, that is, four pairs of preanal and five pairs of postanal, pedunculate papillae are on narrow caudal alae, the gubernaculum is absent, and several longitudinal striae are running on the ventral surface anterior to the caudal alae, etc., the present genus is completely alike *Ascarophis*. In *Ascarophis*, however, the mouth bears pseudolabia. From these points, the present genus is named *Johnstonmawsonoides* and included in the subfamily Ascarophidinae of Rhabdochonidae in accordance with SKRJABIN *et al.* (1967).

Johnstonmawsonoides n. g.

Rhabdochonidae, Ascarophidinae. Body filiform. Cuticle transversely striated except for anterior end of body. Mouth bare, dorsoventrally elongate, with four cephalic papillae and two amphids. Cephalic cuticle slightly swollen. Vestibule slender, with very fine transversely striated chitinous wall. Esophagus divided into two portions; anterior portion short and muscular, posterior portion long and glandular. Nerve ring slightly anterior to equator of muscular esophagus. Cervical papillae symmetrical, at junction of vestibule with muscular esophagus. Excretory pore near junction of muscular esophagus with glandular esophagus. Male:— Body smaller, spirally coiled posteriorly. Caudal alae narrow; longitudinal striae running on ventral surface anterior to caudal alae. Four pairs of preanal and five pairs of postanal,

pedunculate papillae present. Spicules unequal. Gubernaculum absent. Tail bluntly pointed. Female:— Vulva near equator of body. Uteri opposed. Egg thick-shelled, embryonated, with downy ornament at both poles. Tail bluntly pointed.

Parasitic in intestine of marine teleosts.

Type-species: *Johnstonmawsonoides nemichthyos* n. sp.

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